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Research Paper

The Role of Entrepreneurial Bricolage and Strategic Agility in Advancing Sustainable Entrepreneurship among Pakistani SMEs

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Abstract

This study examines the impact of entrepreneurial bricolage (EB) on sustainable entrepreneurship (SE) within Pakistani small and medium-sized enterprises (SMEs) focusing on strategic agility as mediating factor. Recognizing the critical role of SMEs in driving economic growth and sustainability especially in developing nations such as Pakistan, this paper investigates how resource constrained businesses can extend their lifespan and succeed despite environmental challenges. Using primary data from Pakistani entrepreneurs, This study explored how businesses leverage entrepreneurial bricolage, a process of resource improvisation and adaptability to foster SE. The findings reveal that strategic agility characterized by responsiveness to change enhances effectiveness of bricolage by seize emerging opportunities and helping SMEs. Our study proposes that SMEs in Pakistan can achieve SE by transforming their resource strategies through strategic agility ultimately advancing business resilience and sustainability.

Introduction

Various problems may hinder the growth in sustainability (Henriquez-Daza, Capelleras, & Osorio-Tinoco, 2023). However, it is also clear that the sustainable entrepreneurship (SE) can prosper as well as sustain in such an unpredictable environment, as there are numerous instances that one can observe in these regions like sub-continent. In fact, some argue that the challenges of operating in underdeveloped economies can actually foster innovation and creativity among entrepreneurs (Anwar, Tajeddini, & Ullah, 2020). Emerging economies are often favorable for small and medium enterprises (SMEs) because they have lower obstacles to entry, expanding consumer markets, and a possibility for innovation and expansion. Small businesses can take advantage of the prospects offered by developing economies to establish their presence, grow their activities, and make a positive impact on economic progress (Adomako et al., 2022). However, if they are not feasible, entrepreneurial start-ups are ineffective in economies that are struggling. Thus, the objective of this study is to determine the features that make entrepreneurial start-ups stronger in the long run. In this case, sustainability becomes essential since it ensures benefits for society in terms of social, economic, and environmental problems (Muhmad & Muhamad, 2021). The management philosophy specifically tries to understand all the steps entrepreneurs must take when operating their businesses with little resources (Davidsson, Baker, & Senyard, 2017). Based to the literature, entrepreneurial bricolage (EB) can be highly advantageous when enterprises are just beginning to compete with one another. EB can also be risky if used excessively; it may prevent expansion, limit innovation, inefficiently control resources, and increase the likelihood of failure for early-stage businesses. As a result, it is vital to investigate the determinants of its net consequences, which have not previously been thoroughly studied (Steffens et al., 2022).

In recent years, the management community has focused on strategic agility as a significant variable. In addition to being a strategy for observing changes both internally and internationally, strategic agility enables businesses to remain competitive by responding quickly to changes (Christofi, Chourides, & Papageorgiou, 2023). Strategic agility empowers small enterprises in less developed nations to swiftly adjust to fluctuating market conditions, enabling them to capitalize on emerging opportunities and effectively manage risks. Strategic agility also enables small enterprises to leverage their inherent advantages, overcome regulatory obstacles, and promote innovation, so improving their competitiveness and long-term sustainability (ALfarajat, 2023). Previously this strategy usually has been studied in relation to large organizations where it contributed positively in business success. Organizations with larger teams and greater diversity in age, skills and experience are much more likely to launch successful ventures with substantial possibility of growth by using strategic agility (Xing et al., 2020). Strategic agility enables huge organizations to navigate difficulties more successfully and achieve corporate objectives with better efficiency by promoting a culture of flexibility, responsiveness, and continuous development (Cho et al., 2023). Multiple studies

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have been conducted on the efficacy of strategic agility in relation to large organizations. The little research on the efficacy of strategic agility in entrepreneurial ventures is attributed to the dynamic and unexpected nature of start-up environments, which poses challenges in conducting rigorous empirical investigations (Sreenivasan & Suresh, 2023). Additionally, startups are often more focused on survival and rapid growth, which may prioritize immediate operational concerns over strategic agility research. Therefore, how strategic agility helps entrepreneurial startups in sustaining the growth is another primary purpose of this study. This paper explores how strategic agility plays a role in applying EB to achieve SE. Our research questions are as follows:

RQ1: *How does strategic agility connect EB with SE?*
RQ2: *Is there a positive correlation between EB and strategic agility?*
RQ3: *Does EB show a positive relationship with SE?*
RQ4: *Do SE and strategic agility complement each other?*

Literature Review

Theoretical background

The effectuation theory, a well-known theory of SE first presented by Sarasvathy in 2001 serves as the foundation for this paper. This theory combines the ideas of strategic agility, SE, and EBin a way that is simple enough for everyone working in a business to understand. A number of fresh theoretical viewpoints have emerged to explain the actions and logic of entrepreneurial activity as a result of the growing interest in entrepreneurship as a research area (Coudounaris & Arvidsson, 2022). The traditional framework of entrepreneurship extensively depends on economic principles to explain how an individual or firm participates in entrepreneurial activities by recognizing opportunities when there is a demand for a product or service (Pacho & Mushi, 2021). Planning-based approaches appear to be ineffective in contexts with true uncertainty, such as Pakistan's unstable business climate. This is because strategies used for previous businesses frequently fail to effectively predict the future direction of business. In contrast, strategies that are more adaptable, exploratory, and flexible appear to be better suited for start-ups that must manage continuous unexpected business conditions (Roach, Ryman, & Makani, 2016). Therefore, it has been suggested that in the absence of uncertainty, venture creation benefits from a planning-based approach, whereas in the presence of uncertainty, collaborative, flexible choices are essential.

EB and Strategic Agility

Entrepreneurial bricolage, a practice that involves the innovative use of current assets to overcome obstacles and take advantage of favorable situations, inherently promotes strategic agility by enabling businesses to change and respond to evolving environmental situations immediately. As a result, EB can compel businesses to align their strategies with agility in responding to the business environment. Past literature also supports the entrepreneurs' ability to achieve entrepreneurial bricolage, allowing them to create, test and regulate their processes as needed; thus, improving their agility and responsiveness to market changes and competitive forces (Halim, Zainal, & Ahmad, 2022). Firms using EB use the resources available to them to leverage time as an advantage over less agile and fragile competitors. EB can also remodel agility by allowing firms to unexpectedly regroup and use the resources at their disposal to withstand external shocks (Clauss et al., 2019).

EB therefore enables firms to perform techniques with agility and resilience to properly deal with unforeseen and urgent market needs. Moreover to strategic agility and competitiveness of SMEs must also determine entrepreneurial bricolage. In the given important scenario, SMEs must adjust their capacity to discover effective solutions to new issue forth by the utilizing their current resources (Alsharif et al., 2021). Firms manage the businesses with the agility and embrace positive attitude to find solutions for their persistence in the dynamic business environments. SMEs must understanding the fundamental theory of the entrepreneurial bricolage, which implies utilizing minimum the key resources to discover the practical solutions during emergencies and rejoin to the environmental changes with agility (Halim et al., 2022). Consequently, it can be affirmed that the EB greatly augments the strategic agility of SMEs through its capability to adapt. Established on the prior discussion, a hypothesis can be formulated.

H1: *EB has a significant and positive impact on Strategic Agility.*

EB and SE

EB is the imperative practice through the which entrepreneurs ensure their survival along with competitiveness through recombination and reuse of current assets. Research also appears on various topic that firms may be able to overcome their restrained resources and reap superior performance through bricolage approaches. Moreover, the EB can lead to the balanced entrepreneurship that advantages to cope with the social and environmental concerns. Entrepreneurs who relate with EB can locate possibilities of creating the products or services that not only meet the demands of the market but also have social and environmental effects (Lee & Park, 2023). It is very important for the SMEs to increase growth. The effectuation theory also supports idea that EB influences SE by hopeful the entrepreneurs to leverage their existing resources, take calculated risks, and create businesses that are socially and environmentally responsible (Johnson & Hörisch, 2022). Researchers learned that EB enables individuals to use effectuation in SMEs, specifically at early stages (Scazziota et al., 2023). Consequently, drawing from the literature, this study formulate the successive hypothesis.

H2: *EB has a significant and positive impact on SE.*

Strategic Agility and SE

Strategic agility is flexibility and adaptability which can be

particularly vital for SE because it lets businesses to adjust their strategies as well as various operations in response to evolving societal as well as environmental concerns (Bertello et al., 2022). Sustainable entrepreneurs, who are advantageously agile, might able to turn around their businesses to involve new, sustainable practices by the sourcing materials from eco-friendly suppliers or staging energy-efficient manufacturing procedures. This aptitude to evolve and innovate can benefit sustainable entrepreneurs meet the client's demands while retaining their dedication to sustainability (Sari & Ahmad, 2022). Based on prior empirical research, strategic agility is crucial in accelerating the shift towards business sustainability and advancing organizations to confront challenges while enhancing their performance to tackle future competition. Strategic agility does not pertain to a specific change that an organization is addressing in reaction to a significant danger or disaster; strategic agility refers to a company's consistent capacity to efficiently alter its course of action to uphold its sustainability (Elali, 2021). Strategic agility can be crucial for firms to maintain sustainability under competitive environmental situations. Agile businesses can continuously reinvent themselves by adjusting their skills according to the dynamic environment to ensure long-term survival and growth. Strategic agility involves being adaptable to new changes, continually adjusting the company's strategic direction, and creating novel techniques to generate profit (Yildiz & Aykanat, 2021). Entrepreneurs may swiftly adjust to shifting market conditions through strategic agility, which helps them capitalize on new possibilities and overcome problems efficiently. Thus, based on the literature, this study constructed the following hypothesis.

H3: *Strategic Agility has a significant and positive impact on SE.*

Mediating Effect of Strategic Agility between EB and SE

In the context of businesses, strategic agility mediates between EB and sustainable business. By being agile and adaptable, entrepreneurs can create progressive responses using available assets while keeping in mind the long-term sustainability of their business. Strategic agility mediates EB by enabling entrepreneurs to quickly adapt to market changes, see new opportunities, and use resources innovatively to solve social, monetary, and environmental problems. The indirect effect has many benefits for the companies. Socially, it encourages awareness and support for various community issues, advancing inclusivity and social impact projects. Mediation effect can transfer the important effect for sustainability. Economically, strategic agility enables entrepreneurs to effectively deal with market uncertainty, allocate resources efficiently, and promote sustainable growth. Environmentally, it helps to the promote eco-friendly behaviors and technologies, reducing ecological footprints and encouraging environmental control (Gligor, Esmark, & Holcomb, 2015). Entrepreneurs can also iterate and refine their products or services based on real-time feedback, which can help them create sustainable value for their stakeholders. As discussed earlier, the Lemonade Principle (of effectuation theory) also supports the mediating role of strategic agility between EB and SE. It says that ventures can turn surprises into opportunities and can be sustained longer by acting quickly (Hauser, Eggers, & Güldenberg, 2020). Thus, based on the literature, this study established the following hypothesis.

H4: *Strategic Agility mediates the relationship between EB and SE.*

Methodology

Data collection and Sample technique

The SMEDA and the Chamber of Commerce were chosen for this study because they are the best networks in Pakistan for reaching the target audience. The respondents were entrepreneurs. During the study process, the questionnaire was developed, and consumers were asked to respond both online and offline. The study gathered a total of 756 questionnaires. Responses were considered invalid if participants left more than five questions unanswered. Meeting statistical requirements, 392 valid questionnaires were collected, resulting in a successful rate of 51.8%. The demographic breakdown showed that 24% of respondents were female, while 76% were male. Age distribution revealed that 3.96% were under 20, 38.51% were between 21 and 30, 45.08% between 31 and 40, 8.4% between 41 and 50, and 3.33% were over 51. Involving education, 20.13% had finished undergraduate studies, 54.2% held a bachelor's degree, and 25.6% had a master's degree or higher. For annual household income, 26.47% reported less than Rs. 120,000, 34.39% between Rs. 121,000 and Rs.240,000, 21.24% between Rs. 250,000 and Rs. 300,000, and 17.9% above Rs. 300,000. As for work experience, 6.81% had under three years, 35.5% had three to six years, 28.05% had seven to nine years, and 29.64% had over ten years of experience.

Measure

Critical concepts are measured mainly by conducting thorough research in these areas, reviewing existing literature, examining real-world applications of entrepreneurial bricolage, strategic agility, and SE and gathering insights from entrepreneurial experts. This research uses a seven-point Likert scale to evaluate EB and strategic agility in the context of SE. Davidsson et al. (2017) established the EB measure, which includes nine items. The variable of strategic agility is measured using a 9-item scale developed by Hock, Clauss and Schulz (2016) after adaptation. The SE metric is established using 16 scale items adapted from Roomi, Saiz-Alvarez and Coduras (2021).

Data Analysis and Results

PLS-SEM is most significant, widely used, and broadly accepted approach in social sciences studies (Hair Jr, Howard, & Nitzl, 2020; Hameed et al., 2017; Hameed et al., 2022). Despite being developed independently and for numerous purposes, SEM shares a number of significant resemblances, such as the

inclusion of latent variables or random effects to produce and thereby clarify associations among responses (Rabe-Hesketh, Skrondal, & Zheng, 2007). SEM is a multivariate methodology that relates numerous techniques, involving linear regression analysis and principle factor analysis (Fornell & Bookstein, 1982) and is beneficial in the development as well as assessment of multivariate theories (Hair et al., 2012; Ringle, Sarstedt, & Straub, 2012). In the first part of SEM, reliability and validity was considered. Factor loading is reported in Table 1 along with CR and AVE showing the confirmation of reliability of all scale items and constructs. Factor loading, CR and AVE is higher than 0.5, 0.7 and 0.5, correspondingly. Additionally, discriminant validity was achieved by using AVE square root which is reported in Table 2.

Table 1: Factor Loading, CR and AVE.

Variable	Scale Items	Factor Loadings	Composite Reliability (CR)	Average Variance Extracted (AVE)
Entrepreneurial Bricolage	EB1	0.72	0.88	0.55
	EB2	0.75		
	EB3	0.77		
	EB4	0.80		
	EB5	0.68		
	EB6	0.85		
	EB7	0.70		
	EB8	0.73		
	EB9	0.76		
Strategic Agility	SA1	0.62	0.90	0.58
	SA2	0.78		
	SA3	0.80		
	SA4	0.82		
	SA5	0.87		
	SA6	0.68		
	SA7	0.72		
	SA8	0.75		
	SA9	0.70		
SE	SE1	0.65	0.92	0.60
	SE2	0.70		
	SE3	0.74		
	SE4	0.77		
	SE5	0.69		
	SE6	0.80		
	SE7	0.82		
	SE8	0.73		
	SE9	0.79		
	SE10	0.83		
	SE11	0.68		
	SE12	0.72		
	SE13	0.75		
	SE14	0.78		
	SE15	0.76		
	SE16	0.85		

Table 2: AVE Square Root.

Variable	Entrepreneurial Bricolage	Strategic Agility	SE
Entrepreneurial Bricolage	0.74		
Strategic Agility	0.50	0.76	
SE	0.45	0.55	0.77

Results of hypotheses are given in Table 3 and Figure 1. These results are reported by using beta value, t-value and p-value. T-value 1.96 was considered to check the significance of the relationship along with p-value 0.05. Beta value was observed to consider the direction of relationship. PLS structural model was employed which is most popular to examine the relationship between variables (Hair, Ringle, & Sarstedt, 2011; Hair Jr et al., 2017; Yusif et al., 2020). Results highlighted that all the hypotheses have t-values above 1.96. Furthermore, p-value of all hypotheses is less than 0.5 which supported all the hypotheses, including direct and indirect effect hypotheses. Positive beta value of all the relationships showing the positive effect.

Table 3: Results.

Hypothesis	Beta Value	t-value	p-value	Result
H1: EB→ Strategic Agility	0.45	5.60	0	Supported
H2: EB→ SE	0.38	4.25	0	Supported
H3: Strategic Agility → SE	0.50	6.10	0	Supported
H4: Strategic Agility mediates the relationship between EB and SE	0.22	3.90	0	Supported

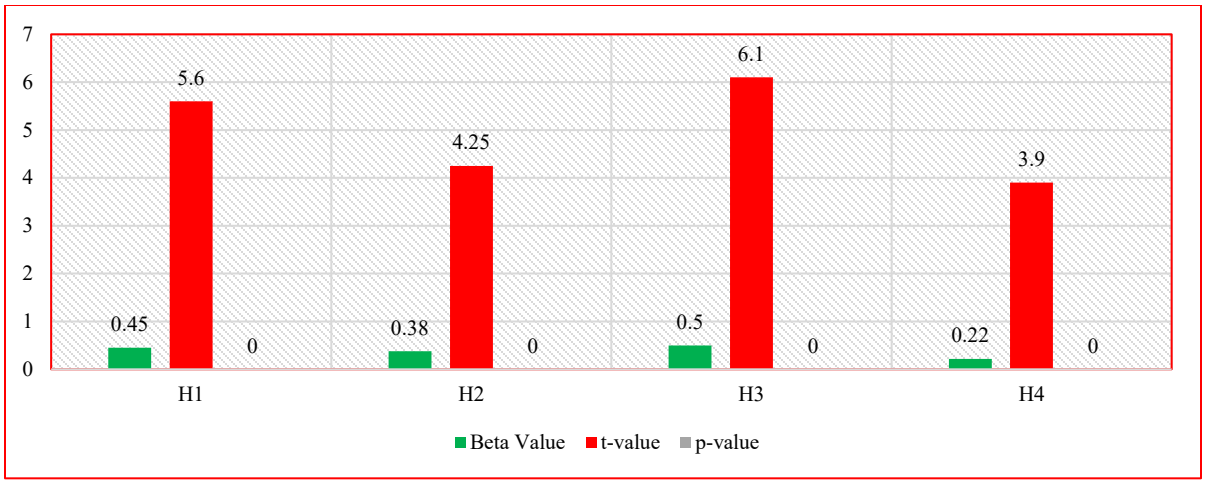

Figure 1: Hypotheses Results.

Conclusion

Based on previous research and literature, this observation suggested that there may be a huge and significant connection between SE and entrepreneurial bricolage. In addition, the effectuation theory, which serves as the primary theory of this study, facilitates the relationship between EB and the SE. Characterized by its iterative and useful nature with limited resources, EB allows entrepreneurs to create progressive responses that are consistent with sustainability goals (Roach et al., 2016). The study's results show that there is not a strong direct link between EB and SE. However, results do confirm the existence of the strategic agility which act as mediator provides a clear link between EB and SE, particularly in the setting of the prevailing environmental turbulence in undeveloped nations such as Pakistan.

In addition, strategic agility has been proven to act as a mediator between SE and EB during this empirical study. The findings of this investigation along with the effectuation theory guides the future researchers that strategic agility greatly impacts the process of transformation encompasses the EB main features; originality and adaptability into SE. This transformation can be done by the external expansion and integration of innovative business strategy. Strategic agility gives entrepreneurs an ability to predict future which requires demands of the consumers in turbulent times, new approaches and successful business model (Xing et al., 2020). Strategic agility enables entrepreneurs to create a beneficial impact on society and establish strong and successful agencies by promoting a flexible and adaptable approach to business (Kohtamäki et al., 2020). Therefore, drawing from our findings, our study proposes that small and medium-sized businesses should transform their EB by developing strategic agility in the face of the country's persistent environmental turbulence to achieve SE.

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CRediT Authorship Contribution Statement

Ali Imran: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization. Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The author declares no relevant financial or non-financial interests to disclose.

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Ethical Statement

This study adhered to ethical standards, and ethical approval was unnecessary as no human tissue or biological samples were used.

Data Availability Statement

The datasets generated and analyzed during this study can be obtained from the corresponding author on reasonable request.

Artificial Intelligence/ Language Module Statement

The author takes full responsibility for this work. It was completed independently without AI or LLM assistance.

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